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FORM PTO-1390 (REV. 11-2000) U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE ATTORNEY 'S DOCKET NUMBER VOCL 19.298 TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) US APPLICATION NO (If known, see 37 CFR 15 CONCERNING A FILING UNDER 35 U.S.C. 371 INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE PRIORITY DATE CLAIMED PCT/IL00/00258 07 MAY 2000 (07.05.00) TITLE OF INVENTION Method and Apparatus for Remote Control of a Website Visit APPLICANT(S) FOR DO/EO/US Ofer SHEM TOV, et al. Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: 1. **X** This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371. 2. This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371. 3. X This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. The US has been elected by the expiration of 19 months from the priority date (Article 31). 5. A copy of the International Application as filed (35 U.S.C. 371(c)(2)) is attached hereto (required only if not communicated by the International Bureau). has been communicated by the International Bureau. is not required, as the application was filed in the United States Receiving Office (RO/US). 6. An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). is attached hereto. has been previously submitted under 35 U.S.C. 154(d)(4). 7. 🗶 Amendments to the claims of the International Aplication under PCT Article 19 (35 U.S.C. 371(c)(3)) are attached hereto (required only if not communicated by the International Bureau). have been communicated by the International Bureau. have not been made; however, the time limit for making such amendments has NOT expired. have not been made and will not be made. 8. An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)). 9. An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. An English lanugage translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). Items 11 to 20 below concern document(s) or information included: An Information Disclosure Statement under 37 CFR 1.97 and 1.98. An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 12. \square 13. **X** A FIRST preliminary amendment. A SECOND or SUBSEQUENT preliminary amendment. 14. 15. A substitute specification. 16. A change of power of attorney and/or address letter. A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825. 17. A second copy of the published international application under 35 U.S.C. 154(d)(4). 18. A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 19. Copy of WO 01/86451 20. Other items or information: Filed by Express Mail (Receipt No. EL868036053US) The Commissioner is hereby authorized to charge any on January 4, 2002 additional fees which may be required, or credit any overpayment to Deposit Account No. 50-1290. pursuant to 37 C.F.R. 1.10. by

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Amount to be refunded: charged: cover the above fees is enclosed. charge my Deposit Account No. 50-1290 in the amount of \$ 1,000.00 to cover the above fees. A duplicate copy of this sheet is enclosed. c. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-1290 . A duplicate copy of this sheet is enclosed. d. Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status. SEND ALL CORRESPONDENCE TO: ROSENMAN & COLIN LLP 575 Madison Avenue New York, New York 10022-2585 (212) 940-8800 C1212) 940-8806	Fee for recording the accompanied by an	e enclosed assign appropriate cover	ment (37 CFR 1.21(h)). sheet (37 CFR 3.28, 3.3	The assignm 1). \$40.00 p	ent must be er property +	\$			
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<u>January 4, 2002</u>

Any fee due as a result of this paper, not covered by an enclosed check, may be charged on Deposit Acct. No. 50-1290.

Attorney Docket No.: VOCL 19298

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor

Ofer SHEM TOV

Serial No.

Concurrently Herewith

Filed

Concurrently Herewith

Title

METHOD AND APPARATUS FOR REMOTE

CONTROL OF A WEBSITE VISIT

January 4, 2002

Assistant Commissioner for Patents Washington, D.C. 20231

PRELIMINARY AMENDMENT

SIR:

Prior to the issuance of an Office Action, please amend the application as follows:

In the Claims

Please amend claim 4, 5, 7, 12, 13, 15 as follows:

- 4. (Amended) The apparatus according to Claim 1, wherein the network contains a public switched telephone network an a computer network.
- 5. (Amended) The apparatus according to Claim 1 being further configured for receiving and storing data.
- 7. (Amended) The apparatus according to Claim 1 further comprising a computer telephony/Internet interface configured to convert a DTMF signal transmitted over a public switched telephone network into an equivalent Internet Protocol signal.

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- 12. (Amended) The method according to Claim 1 wherein the network contains a public switched telephone network and a computer network.
- 13. (Amended) the method according to Claim 9 further comprising steps of receiving and storing data.
- 15. (Amended) The method according to Claim 9 further comprising a step of converting a DTMF signal into an equivalent Internet Protocol signal.

REMARKS

Claims 4, 5, 7, 12, 13, 15 were amended to correct multiple dependency.

Attached hereto is a marked-up version of the changes made to the application by the current amendment. The attached page is captioned <u>"Version with markings to show changes made."</u>

Any fee due with this paper, not fully covered by an enclosed check, may be charged on Deposit Account 50-1290.

Respectfully submitted,

Brian Myers

Reg. No. 46,947

ROSENMAN & COLIN LLP 575 Madison Avenue New York, New York 10022-2585 (212) 940-8800 (212) 940-8986

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

- 4. (Amended) The apparatus according to any one of the previous claims Claim 1, wherein the network contains a public switched telephone network an a computer network.
- 5. (Amended) The apparatus according to any one of the previous claims Claim 1 being further configured for receiving and storing data.
- 7. (Amended) The apparatus according to any one of the previous claims <u>Claim 1</u> further comprising a computer telephony/Internet interface configured to convert a DTMF signal transmitted over a public switched telephone network into an equivalent Internet Protocol signal.
- 12. (Amended) The method according to any one of the previous claims Claim 1 wherein the network contains a public switched telephone network and a computer network.
- 13. (Amended) The method according to any one of Claims 9 to 12 Claim 9 further comprising steps of receiving and storing data.
- 15. (Amended) The method according to any one of Claims 9 to 14 Claim 9 further comprising a step of converting a DTMF signal into an equivalent Internet Protocol signal.

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METHOD AND APPARATUS FOR REMOTE CONTROL OF A WEBSITE VISIT

FIELD OF THE INVENTION

The present invention relates generally to methods and apparatuses for interfacing with the Internet.

BACKGROUND OF THE INVENTION

An Internet Website typically consists of a large number of web pages. A surfer to a website is initially presented with a menu describing the contents of some of the web pages at the site. For example, the Website may be of a publishing company offering for sale various goods such as books, musical recordings, posters, etc. The surfer is prompted to select a web page from the 10 monu providing the information he is seeking. If for example, the surfer selects "books' from the menu, he will arrive at a web page where he is presented with another menu prompting him to select a web page providing more specific information of interest to him, for example, books of a particular genre.

This process of selecting a web page from successive menus ideally 15 continues until the surfer has arrived at the ultimate web page providing the specific information he is seeking. Unfortunately, however, quite often the surfer is bewildered by the maze of web pages he must navigate through in order to arrive at the ultimate page. An inappropriate page selection from a menu at one stage may lead the surfer astray, possibly irretrievably. Out of frustration, the surfer may just decide to leave the site altogether. For a commercial Website, the loss of customers due to their inability to navigate to the ultimate page they are seeking obviously represents an unnecessary loss of potential revenue.

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In view of this problem, some websites allow a surfer to contact a human agent of the site by means of a two-way audio connection. The connection is is transmitted partly over the internet via a "voice over Internet Protocol" (VoIP) connection, and partly over a public switched telephone network (PSTN). The connection may be initiated by the surfer clicking a button on his screen. The surfer may describe to the agent what information he is seeking at the site. The agent, by means of audio commands, guides the surfer through the site by instructing him as to the selection he must make from each menu in order to arrive, ultimately, at the page he is seeking. Since the surfer may be unable to accurately describe to the agent his location in the site and what he is looking for at the website, misunderstandings may occur, so that even with the agent's help the surfer may not obtain the information or service he is seeking.

A dual-tone multiple-frequency (DTMF) signal is the additive combination of two constant amplitude sinusoidal components. DTMF signals are used *inter alia* for representing telephone numbers and other signaling functions within a telephone system including interactive voice response. For example, the signal generated by depressing "1" on the telephone keypad is the sum of a 697 Hz and a 1209 Hz sine wave, and the signal generated by depressing the "5" is the sum of a 770 Hz and a 1336 Hz sine wave.

DTMF signals have been used in interfacing with the Internet. U.S. Patent No. 5,761,280 discloses browsing on the internet at a computer terminal using DTMF signals generated by depressing keys on a telephone key pad located near the computer terminal. U.S. Patent No. 5,945,989 discloses modification of a website using DTMF signals generated by an individual depressing keys on a telephone keypad connected by a Public Switched Telephone Network (PSTN) to the website server. Neither of these inventions is relevant to the problem of guiding a surfer through a website.

There is therefore a need in the art for a method to assist a surfer to a website in navigating within the site that reduces or eliminates the disadvantages of the known methods.

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SUMMARY OF THE INVENTION

While the present invention will be described primarily in relation to the Internet and the World Wide Web, it is also applicable to Intranets or other public networks that employ or could employ an Internet Protocol and/or a graphical user interface (GUI).

The invention provides a system that allows a remotely located agent to control aspects of a surfer's visit through a website. The invention is invoked, for example, when the surfer contacts the website's call center and requests assistance from an agent. The invention allows the agent to provide a rapid response to the surfer's request.

In response to a request from the surfer, the agent issues commands to the surfer's computer. A typical command might be, for example, that the web page currently displayed on the surfer's computer screen be replaced with another web page. The commands are coded in the form of DTMF signals that are generated when the agent depresses keys on a telephone keypad. The signals are initially transmitted from the agent's telephone over a PSTN to a computer telephony/Internet (CT/I) interface that transmits the DTMF signals to the surfer's computer over the Internet. The signals are decoded by the computer into commands in accordance with data that were stored in the computer when the surfer entered the site. The data assign each of a plurality of commands to a unique DTMF signal. The commands are transmitted over the Internet to the website, as is known per se, for example in Hypertext Markup Language (HTML). The website, in turn, executes the commands as if they had been initiated by the surfer and not by the agent.

Any type of command that can be stored in the application generator's database can be issued by the agent. Examples of such commands include the following:

(1) Changing the web page appearing on the surfer's screen. For example, the surfer may tell the agent what information he is seeking at the website, and in response, the agent will have the web page

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containing this information displayed on the surfer's screen. The agent may accomplish this without having to display on the surfer's screen any intermediate pages, for example, those pages that the surfer would have to navigate through to arrive at the new page without the agent's assistance.

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- (2) Graphical modification of a web page appearing on the surfer's screen. For example, the agent might highlight a portion of the web page in order to draw the surfer's attention to information in that portion of the page.
- (3) Generating an audio message or signal possibly coordinated with a graphical modification.
 - (4) Inputting data for the surfer into an e-form appearing on the surfer's screen and submitting the form.

The computer telephony/Internet (CT/I) architecture is an interface between the Public Switched Telephone Network (PSTN) and the Internet. The CT/I architecture allows a call agent without computer telephony hardware to take advantage of the TCP/IP open communication protocol to issue commands in the form of DTMF signals to the surfer's computer.

The invention thus provides an apparatus for remote control of a website visit configured to carry out steps of:

- a. receiving one or more DTMF signals transmitted from a remote source over a network, the DTMF signals coding for one or more commands and
- b. executing the commands coded by the DTMF signals so as to control the website visit.

The invention further provides a method for remote control of a website visit, comprising steps of:

- a. receiving one or more DTMF signals transmitted from a remote source over a network, the DTMF signals coding for one or more commands, and
- b. executing the commands coded by the DTMF signals so as to control the website visit.

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BRIEF DESCRIPTION OF THE DRAWINGS

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting 5 example only, with reference to the accompanying drawings, in which:

Fig. 1 shows an exemplary architecture of the present invention; and,

Fig 2 shows a flow chart diagram of the method of the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Fig. 1 shows an exemplary architecture that is used with in accordance with one embodiment of the invention. A surfer 115 is connected to a website 120 over the Internet represented a cloud 100.

At a call center 135 is a plurality of human agents 140 each of which is equipped with a touch-tone telephone 145. When the surfer 115 wishes to contact the call center 135, an audio connection is established from the surfer's computer 15 130 to the call agent 140. Between the surfer's computer 130 and the CT/I interface 175, the connection is over the Internet 100. Between the CT/I interface 175 and the agent's telephone 145, the connection being over the PSTN represented by the cloud 180.

When an agent 140 wishes to issue a command to the website 120, he depresses a DTMF signal coding for the command on his telephone's 145 keypad. The DTMF signal is transmitted over the PSTN 180 to the CT/I interface 175 and is then transmitted over the Internet 100 to the surfer's computer 130. The computer 130 then decodes the DTMF signal 180 according to data that was stored in the computer 130 when the surfer logged onto the website 120. The 25 computer then issues the appropriate command to the website 120 over the Internet 100. The website 120 then executes the command as if it had been initiated by the surfer 115 and not the agent 140. If, for example, the command

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was to display a particular webpage on the screen of the computer 130, the surfer 115 would then observe the webpage on his computer screen.

Fig. 2 shows a flow chart diagram of the method of controlling a surfer's visit to a website in accordance with the invention. At step 200 a surfer 115 logs onto a website 120 using his computer 130. The website 120 provides webpages at step 205, and at step 210 the webpages are loaded onto the browser of the computer 130. When the surfer 115 wishes to contact the website's call center 135, a voice over Internet Protocol connection is established over the Internet 100 between the computer 130 and the CT/I interface 175 (step 215). In step 220, the connection is continued from the CT/I interface 175 to the agent's telephone 145 is over the PSTN 180. The agent's telephone rings (step 225) and the agent 140 and the surfer 115 then converse over the audio connection between them (step 230).

When the agent 140 wishes to issue a command to the website 120, he depresses the DTMF signal code for the command on his telephone's 145 keypad (step 235). In step 240, the DTMF signal is transmitted over the PSTN 180 to the CT/I interface 175. The CT/I sends the DTMF signals over the Internet 100 to the surfer's computer130 (step 245). In step 250, the computer 130 receives the DTMF signals and in step 255 the computer 130 decodes the signals and issues the appropriate command to the website 120 over the Internet 100. The website 120 then executes the command in step 260. In step 270 execution of the command is observed on the screen of computer 130.

The present invention has been described with a certain degree of particularity but it should be understood that various modifications and alterations may be made without departing from the scope or spirit of the invention as defined by the following claims. In the method claims that follow, alphabetic characters used to designate claim steps are provided for convenience only and do not imply any particular order of performing the steps.

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CLAIMS:

- 1. An apparatus for remote control of a website visit configured to carry out steps of:
- a receiving one or more DTMF signals transmitted from a remote source over a network, the DTMF signals coding for one or more commands, and
 - b executing the commands coded by the DTMF signals so as to control the website visit.
 - 2. The apparatus according to Claim 1 further comprising a DTMF signal generator.
- 10 3. The apparatus according to Claim 2 wherein the DTMF signal generator is a touch-tone telephone.
 - 4. The apparatus according to any one of the previous claims, wherein the network contains a public switched telephone network an a computer network.
- 15 5. The apparatus according to any one of the previous claims being further configured for receiving and storing data.
 - 6. The apparatus according to Claim 5, wherein the stored data consist of a code assigning a unique DTMF signal to each of one or more commands.
- 7. The apparatus according to any one of the previous claims further comprising a computer telephony/Internet interface configured to convert a DTMF signal transmitted over a public switched telephone network into an equivalent Internet Protocol signal.
 - 8. The apparatus according to Claim 6 further configured to carry out a step of decoding a DTMF signal by executing the command assigned to the DTMF signal.
 - 9. A method for remote control of a website visit, comprising steps of:
 - a receiving one or more DTMF signals transmitted from a remote source over a network, the DTMF signals coding for one or more commands, and

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- b executing the commands coded by the DTMF signals so as to control the website visit.
- 10. The method according to Claim 9 further comprising a step of generating one or more DTMF signals and transmitting the DTMF signals over the network.
- 11. The method according to Claim 10 wherein the step of generating one or more DTMF signals involves depressing buttons on the keypad of a touch-tone telephone.
- 12. The method according to any one of the previous claims wherein the network contains a public switched telephone network and a computer network.
 - 13. The method according to any one of Claims 9 to 12 further comprising steps of receiving and storing data.
- 14. The method according to Claim 13, wherein the data consist of a code assigning a unique DTMF signal to each of one or more commands.
 - 15. The method according to any one of Claims 9 to 14 further comprising a step of converting a DTMF signal into an equivalent Internet Protocol signal.
- 16. A method according to Claims 14 further comprising a step of decoding a

 DTMF signal by executing the command assigned to the DTMF signal.

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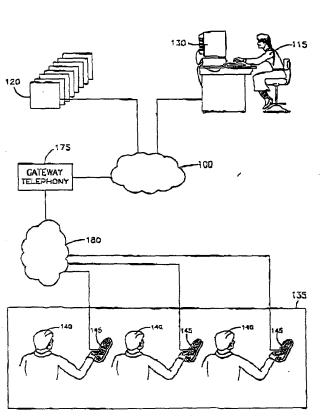
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(54) Title: METHOD AND APPARATUS FOR REMOTE CONTROL OF A WEBSITE VISIT



(57) Abstract: A method and apparatus for remote control of a website (120) visit. The method consists of receiving DTMF signals transmitted from a remote source over a network (100), where the DTMF signals code for a website (120) command. The commands coded by the DTMF signals are then executed so as to control the website (120) visit.

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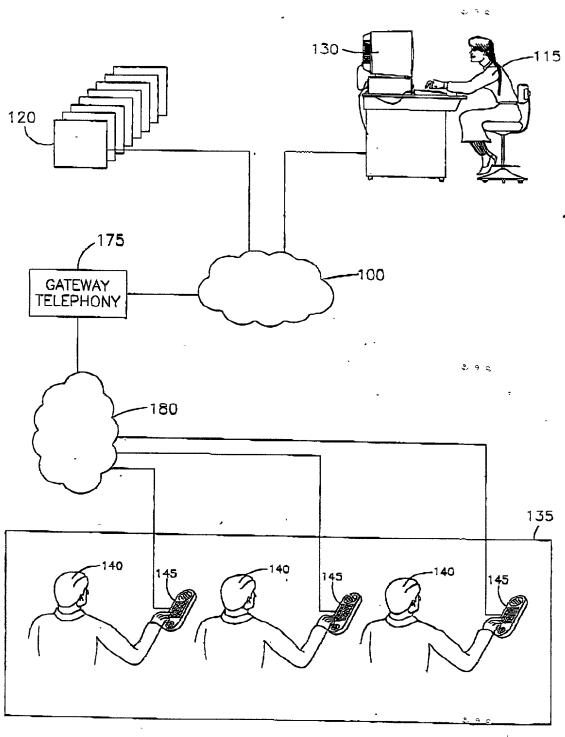


FIG.1

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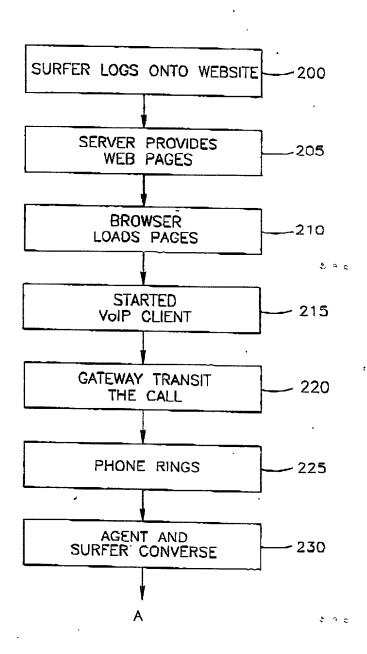


FIG.2A

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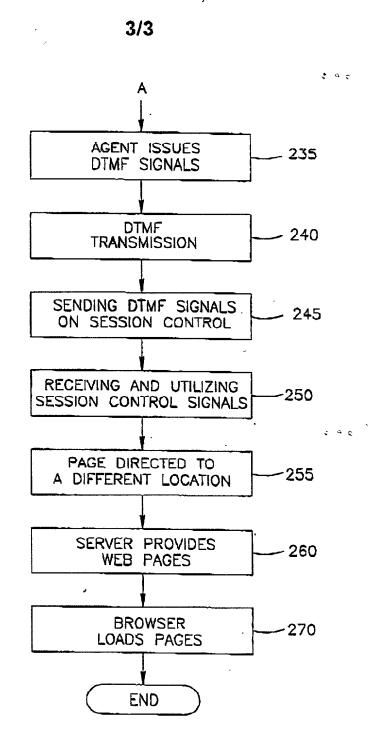


FIG.2B.

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Method and Apparatus for Remote Control of a Website Visit										
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	Given Name (first and middle [if anyl] / Family Name or Surname Ofer SHEM TOV													
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Page 3 of 3

Name of Additional Joint Inventor, if a	A petition has been filed for this unsigned inventor							
Given Name (first and middle [if an	Family Name or Surname							
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Mailing Address								
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Name of Additional Joint Inventor, if a	ny:		A petition has been filed	for thi	is unsigned inventor			
Given Name (first and middle [if an	y])		Family Nam	e or S	urname			
Inventor's Signature		Date						
Residence: City	State		Country		Citizenship			
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